

WHAT IS CLAIMED IS:

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1. An animation display apparatus for combining a plurality of image parts and displaying  
5 animation, comprising:  
image storage means for storing the image parts;  
processor means for executing display processing,  
which is divided into a plurality of logical layers, in  
unit of each layer, said display processing performed  
10 for each image part constructing animation to be  
displayed;  
setting means for setting at least one schedule  
data for each layer, said schedule data having data  
which specifies an image part to be displayed, and  
15 attribute data which includes display update timing;  
and  
control means for controlling processing, set by  
said setting means and performed by processor means of  
each layer, in accordance with the schedule data.

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2. The animation display apparatus according to claim 1, wherein the attribute data includes data related to a display position of an image part.

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3. The animation display apparatus according to claim 1, wherein the attribute data includes data

related to a rotational angle of an image part.

4. The animation display apparatus according  
to claim 1, wherein the attribute data includes data  
5 related to a magnification rate of an image part.

5. The animation display apparatus according  
to claim 1, wherein the attribute data includes data  
related to a coefficient for filtering an image part.

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6. A control method of animation display  
apparatus for combining a plurality of image parts and  
displaying animation, comprising:

a processing step of executing display  
15 processing, which is divided into a plurality of  
logical layers, in unit of each layer, said display  
processing performed for each image part constructing  
animation to be displayed;

a setting step of setting at least one schedule  
20 data for each layer, said schedule data having data  
which specifies an image part stored in a predetermined  
storage, and attribute data which includes display  
update timing; and

a control step of controlling processing, set in  
25 said setting step and performed by a processor of each  
layer, in accordance with the schedule data.

7. A storage medium storing program codes to  
serve as an animation display apparatus, which combines  
a plurality of image parts and displays animation, by  
5 having a computer read and execute the program codes,  
said program codes having functions including:

image storage means for storing the image parts;  
processor means for executing display processing,  
which is divided into a plurality of logical layers, in  
10 unit of each layer, said display processing performed  
for each image part constructing animation to be  
displayed;

setting means for setting at least one schedule  
data for each layer, said schedule data having data  
15 which specifies an image part to be displayed, and  
attribute data which includes display update timing;  
and

control means for controlling processing, set by  
said setting means and performed by processor means of  
20 each layer, in accordance with the schedule data.

8. A game machine for executing a game when a  
coin is inserted and displaying animation when a coin  
is not inserted, comprising:  
25 image parts storage means for storing a plurality  
of image parts used for animation display;

processor means for executing display processing,  
which is divided into a plurality of logical layers, in  
unit of each layer, said display processing performed  
for each image part constructing animation to be  
5 displayed;

setting means for setting at least one schedule  
data for each layer, said schedule data having data  
which specifies an image part to be displayed, and  
attribute data which includes display update timing;  
10 and

control means for controlling processing, set by  
said setting means and performed by processor means of  
each layer, in accordance with the schedule data.

15 9. A control method of a game machine for  
executing a game when a coin is inserted and displaying  
animation when a coin is not inserted, comprising:

a processing step of executing display  
processing, which is divided into a plurality of  
20 logical layers, in unit of each layer, said display  
processing performed for each image part constructing  
animation to be displayed;

a setting step of setting at least one schedule  
data for each layer, said schedule data having data  
25 which specifies an image part to be displayed, and  
attribute data which includes display update timing;

and

a control step of controlling processing, set in said setting step and performed at a processing step of each layer, in accordance with the schedule data.

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10. A storage medium storing program codes to serve as a game machine, which executes a game when a coin is inserted and displays animation when a coin is not inserted, by having a computer read and execute the program codes, said program codes having functions including:

image parts storage means for storing a plurality of image parts used for animation display;

processor means for executing display processing, which is divided into a plurality of logical layers, in unit of each layer, said display processing performed for each image part constructing animation to be displayed;

setting means for setting at least one schedule data for each layer, said schedule data having data which specifies an image part to be displayed, and attribute data which includes display update timing; and

control means for controlling processing, set by said setting means and performed by processor means of each layer, in accordance with the schedule data.

11. An animation display apparatus comprising:  
start-up means for initiating start-up operation  
from a storage medium which stores an OS;
- 5 preliminary processor means for rewriting data,  
subjected to be written in secondary volatile storage  
means at least while the OS is operating, to  
predetermined data based on the storage medium,  
said secondary volatile storage means being accessible  
10 by a CPU in a first stage of each start-up and having a  
file system;
- means for initiating the OS to operate in a  
second stage which is after rewriting operation is  
performed by said preliminary processor means;
- 15 processor means for executing display processing,  
which is divided into a plurality of logical layers, in  
unit of each layer under the operation of the OS, said  
display processing performed for each image part  
constructing animation to be displayed;
- 20 setting means for setting at least one schedule  
data for each layer, said schedule data having data  
which specifies an image part to be displayed, and  
attribute data which includes display update timing;  
and
- 25 control means for controlling processing, set by  
said setting means and performed by processor means of

each layer, in accordance with the schedule data.

12. A game machine having a computer for executing an application program, comprising:

5 start-up means for initiating start-up operation from a storage medium, storing an OS and said application program in a directly executable form;

preliminary processor means for copying data from the storage medium, the data subjected to be written in  
10 a secondary volatile storage at least while the OS and the application program are operating, said secondary volatile storage means being accessible by a CPU in a first stage of start-up and having a file system;

means for initiating the OS to operate in a  
15 second stage which is after copying operation is performed by said preliminary processor means;

processor means for executing display processing, which is divided into a plurality of logical layers, in unit of each layer under the operation of the OS and  
20 the application program, said display processing performed for each image part constructing animation to be displayed;

setting means for setting at least one schedule data for each layer, said schedule data having data  
25 which specifies an image part to be displayed, and attribute data which includes display update timing;





images, stored in the plurality of storage areas and read by said reading means, based on the attribute data set by said setting means.

- 5           14.    A display apparatus comprising:
- start-up means for initiating start-up operation from a storage medium which stores an OS;
- preliminary processor means for rewriting data, subjected to be written in secondary volatile storage
- 10   means at least while the OS is operating, to predetermined data based on the storage medium, said secondary volatile storage means being accessible by a CPU in a first stage of each start-up and having a file system;
- 15           means for initiating the OS to operate in a second stage which is after rewriting operation is performed by said preliminary processor means;
- image reading means for reading an image stored in a plurality of storage areas under the operation of
- 20   the OS;
- attribute reading means for reading attribute data which includes timing for reading an image stored in the plurality of storage areas; and
- display control means for displaying respective
- 25   images, stored in the plurality of storage areas, read by said image reading means, based on the attribute

data read by said attribute reading means.

15. A display apparatus comprising:

start-up means for initiating start-up operation  
5 from a storage medium which stores an OS;

preliminary processor means for rewriting data,  
subjected to be written in secondary volatile storage  
means at least while the OS is operating, to  
predetermined data based on the storage medium,  
10 said secondary volatile storage means being accessible  
by a CPU in a first stage of each start-up and having a  
file system;

means for initiating the OS to operate in a  
second stage which is after rewriting operation is  
15 performed by said preliminary processor means;

image reading means for reading an image stored  
in a plurality of storage areas under the operation of  
the OS;

setting means for setting attribute data which  
20 includes audio data defined in association with at  
least one image stored in the plurality of storage  
areas; and

output control means for outputting audio data  
based on the attribute data, and displaying respective  
25 images, stored in the plurality of storage areas and  
read by said image reading means, based on the



corresponding to an inputted character string and storing the bit image data, each time a character string is inputted by said input means;

layout means for superimposingly laying out each  
5 of the stored bit image data for each layer; and

output means for outputting image data, obtained by said layout means, to printing means.

18. The sticker printing apparatus according to  
10 claim 17, further comprising setting means for setting a background design for the sticker.

19. The sticker printing apparatus according to claim 17, wherein said input means comprises:

15 means for displaying predetermined sample character strings on the display screen;

means for selecting a character string from the displayed sample character strings by using the touch panel;

20 means for setting the touch panel as character input means; and

means for displaying a virtual keyboard for character input operation when the touch panel is set as character input means.

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20. The sticker printing apparatus according to

claim 19, wherein said input means comprises means for setting a character design.

21. The sticker printing apparatus according to  
5 claim 17, wherein the sticker has a form of *senjafuda* consisting of *kashira* (header), main body of the *senjafuda*, and *sashifuda* (insertion), wherein said input means inputs respective character strings for the *kashira* (header), main body, and *sashifuda* (insertion).

22. The sticker printing apparatus according to claim 21, wherein said printing means prints plural stickers on one sheet.

23. The sticker printing apparatus according to  
15 claim 22, further comprising means for setting whether or not to insert the *sashifuda* (insertion), wherein in a case the *sashifuda* (insertion) is to be inserted, a part of the stickers in one sheet are printed with the  
20 *sashifuda* (insertion).

24. The sticker printing apparatus according to claim 17, further comprising:  
memory means for storing data inputted by said  
25 input means; and  
designation means for designating to return to an

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input subject for changing already-inputted data,  
wherein in a case where said designation means  
designates to return to an input subject, contents  
stored in said memory means are used as a default  
5 setting of the input subject.

25. A control method of a sticker printing  
apparatus for printing a desired sticker by operating a  
touch panel overlaid on a display screen, comprising:  
10 an input step of inputting a plurality of  
character strings to be printed on a sticker, in  
association with a logical layer;  
a storage step of generating bit image data  
corresponding to an inputted character string and  
15 storing the bit image data, each time a character  
string is inputted in said input step;  
a layout step of superimposingly laying out each  
of the stored bit image data for each layer; and  
an output step of outputting image data, obtained  
20 in said layout step, to a printing unit.

26. A storage medium storing program codes to  
serve as a sticker printing apparatus, which prints a  
desired sticker by operating a touch panel overlaid on  
25 a display screen, said program codes having functions  
including:

input means for inputting a plurality of character strings to be printed on a sticker, in association with a logical layer;

storage means for generating bit image data  
5 corresponding to an inputted character string and storing the bit image data, each time a character string is inputted by said input means;

layout means for superimposingly laying out each of the stored bit image data for each layer; and

10 output means for outputting image data, obtained by said layout means, to printing means.

27. An apparatus comprising:

start-up means for initiating start-up operation  
15 from a storage medium which stores an OS;

preliminary processor means for rewriting data, subjected to be written in secondary volatile storage means at least while the OS is operating, to predetermined data based on the storage medium,  
20 said secondary volatile storage means being accessible by a CPU in a first stage of each start-up and having a file system;

means for initiating the OS to operate in a second stage which is after rewriting operation is  
25 performed by said preliminary processor means;

input means for inputting, in association with a

logical layer, a plurality of character strings to be printed on print paper under the operation of the OS;

storage means for generating bit image data  
corresponding to an inputted character string and  
5 storing the bit image data, each time a character  
string is inputted by said input means;

layout means for superimposingly laying out each of the stored bit image data for each layer; and

output means for outputting image data, obtained  
10 by said layout means, to printing means.

28. A sticker printing apparatus comprising:

start-up means for initiating start-up operation  
from a storage medium, storing an OS and said  
15 application program in a directly executable form;

preliminary processor means for copying data from the storage medium, the data subjected to be written in a secondary volatile storage at least while the OS and the application program are operating, said secondary  
20 volatile storage means being accessible by a CPU in a first stage of start-up and having a file system;

means for initiating the OS to operate in a second stage which is after copying operation is performed by said preliminary processor means;

25           input means for inputting, in association with a  
logical layer, a plurality of character strings to be



printed on a sticker under the operation of the OS;

storage means for generating bit image data  
corresponding to an inputted character string and  
storing the bit image data, each time a character  
5 string is inputted by said input means;

layout means for superimposingly laying out each  
of the stored bit image data for each layer; and

output means for outputting image data, obtained  
by said layout means, to printing means.

10

29. A sticker printing apparatus comprising:

start-up means for initiating start-up operation  
from a storage medium which stores an OS;

15 preliminary processor means for rewriting data,  
subjected to be written in secondary volatile storage  
means at least while the OS is operating, to  
predetermined data based on the storage medium,  
said secondary volatile storage means being accessible  
by a CPU in a first stage of each start-up and having a  
20 file system;

means for initiating the OS to operate in a  
second stage which is after rewriting operation is  
performed by said preliminary processor means;

25 generation means for generating a sticker image  
by combining a plurality of character strings or a  
plurality of images to be printed on a sticker under

the operation of the OS; and

print means for printing a plurality of the generated sticker images on print paper.

- 5           30. A sticker printing apparatus comprising:  
start-up means for initiating start-up operation from a storage medium which stores an OS;  
preliminary processor means for rewriting data, subjected to be written in secondary volatile storage  
10 means at least while the OS is operating, to predetermined data based on the storage medium, said secondary volatile storage means being accessible by a CPU in a first stage of each start-up and having a file system;  
15 means for initiating the OS to operate in a second stage which is after rewriting operation is performed by said preliminary processor means;  
means for storing each of a plurality of character strings or a plurality of images to be  
20 printed on a sticker in a plurality of storage areas under the operation of the OS;  
generation means for generating a sticker image by superimposingly combining the plurality of character strings or the plurality of images stored in the  
25 plurality of storage areas; and  
print means for printing a plurality of the

generated sticker images on print paper.

31. A sticker printing apparatus comprising:
- start-up means for initiating start-up operation
- 5 from a storage medium which stores an OS;
- preliminary processor means for rewriting data, subjected to be written in secondary volatile storage means at least while the OS is operating, to predetermined data based on the storage medium,
- 10 said secondary volatile storage means being accessible by a CPU in a first stage of each start-up and having a file system;
- means for initiating the OS to operate in a second stage which is after rewriting operation is
- 15 performed by said preliminary processor means;
- means for storing each of a plurality of character strings or a plurality of images to be displayed, in a plurality of storage areas under the operation of the OS;
- 20 generation means for generating a sticker image by superimposingly combining the plurality of character strings or the plurality of images stored in the plurality of storage areas;
- replacing means for replacing each of the
- 25 plurality of character strings or the plurality of images, constructing the superimposingly combined

sticker image;

print means for printing a sticker image having one of the plurality of character strings or the plurality of images replaced by said replacing means.

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